



1941

### General Business Conditions

**T**HE industrial organization of the country is still in the period of transition to an all-out defense basis, and while the shift is under way some confusion and irregularity in the business reports must be expected. The pace of the defense effort, measured by production and by Treasury disbursements, is quickening despite criticisms of mismanagement and delay; and developments of the past month, including the President's order to the navy to destroy Axis war vessels within the American defense zone, the further German gains in Russia, and the request to Congress for a second Lease-Lend appropriation of \$5,985,000,000, impart a new urgency to the defense program. Non-defense production, on the other hand, is running into more difficulties, at points where its demands for materials come up against the priorities. Activity is slackening in some of the industries making consumers' durable goods, and shifts and substitution of materials are common. These irregularities slow the rise in aggregate production, even while defense expenditures, national income and buying power are increasing.

With the shift to defense reaching this stage, "priorities unemployment" has become a problem of general concern. Representations as to the plight of labor in manufacturing companies which are required to reduce production, or fear they will be unable to get materials for normal operations, are being made to Congress and to the defense authorities. Various estimates are in circulation of the amount of unemployment that may be caused, before the situation is relieved by getting the plants going on defense work or shifting the labor to other employment. Some of these estimates range from 1,500,000 to 3,000,000 workers.

It should be understood, however, that figures of this kind are highly conditional and may prove to be meaningless. The number of workers to be affected by priorities is not foreordained; it is rather a question of how well private and public policies combine to facilitate production and distribution of materials, how effectively the Government spreads defense

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contracts and the industries prepare to do defense work, and how smoothly training of workers for new occupations and moving them to new plants is carried out, where necessary. The situation is not one for alarm or pessimism, but for resolute attack on all elements of the problem.

### Unemployment in Automobile Centers

The automobile manufacturing areas of Michigan will be among those in which shifts of labor will be most necessary, due to the limitation of passenger car output. A Congressional committee, sitting in Detroit, began an investigation of the situation on September 23. It asked leading automobile companies for estimates of their employment next January, including both defense and non-defense activity, and the figures submitted compare as follows with the peak of last June:

Firm	June 1941	Jan. 1942	Loss	Gain
Gen. Motors.....	292,000	245,000	47,000	—
Ford .....	96,261	60,116	36,145	—
Chrysler .....	67,021	52,407	14,614	—
Packard .....	11,655	17,300	—	5,645
Hudson .....	8,365	10,423	—	2,058

These figures reveal the problem, but measure the situation only in these companies. They do not take account of the defense employment that the displaced workers may find elsewhere. The figures of General Electric and Westinghouse, for example, or of the airplane companies and shipyards, would be very different. When the Chevrolet plant in Buffalo was closed down for conversion to production of Pratt & Whitney airplane motors the great majority of the workers found jobs in the aircraft plants in the Buffalo area, including the new Curtiss-Wright plant, or in other defense industries.

Defense authorities can do much to facilitate this transition. A designation of "priorities unemployment area" has been set up for localities particularly affected, such as those making aluminum kitchenware, and the intent is to give preference on defense contracts to these areas. In short, good staff work can help to

smooth the shift of plants and labor and minimize the unemployment.

#### Distribution of Materials

The second aspect of the matter is the distribution of the raw materials available. Mr. C. E. Wilson, president of General Motors, appeared before the Congressional committee, and expressed the opinion that to a considerable extent the shortages of materials were the result of poor planning, maladjustments in priority schedules and hoarding induced by fear. What is needed, he said, is a real appraisal of defense industry's requirements for materials, and intelligent allocations based on facts. He is reported to have said that "people are getting steel who will keep it in the mud for months".

Mr. Wilson was giving expression to an opinion shared in other responsible quarters. The National Association of Purchasing Agents in its latest bulletin says, "Undoubtedly there are hoarded supplies on hand in many places, and attempts will be made to smoke them out." A steel trade review has stated within the month that "filing of priority claims is having the effect of wiping considerable duplicate tonnage off books and the existence of some large inventories is revealed"; and the American Iron and Steel Institute has released an estimate that total requirements for steel, defense and otherwise, for 1941 amount to about 80,000,000 tons, or 95 per cent of capacity at the beginning of the year. Capacity is steadily increasing.

The Supply Priorities and Allocations Board recognizes that the facts as to prospective supplies and requirements of raw materials and the current inventory situation should be authoritatively determined, and the inquiry has been started. Mr. Donald M. Nelson, executive director of the Board, has been instructed to compile full schedules of civilian, military and Lend-Lease needs. The start on collecting inventory information was made some weeks ago, through a questionnaire sent out by the Census Bureau. This will provide a basis for withholding materials from people who are over-stocked, including even the Army and Navy and defense plants where they have accumulations against requirements which could as well be met out of future production.

Another move to improve the situation is the projected change whereby allocations of materials through the seller will be substituted for the present system of issuing priority certificates to the buyer, which has resulted in some cases in more preferences being granted than there are supplies available.

Whether these measures will be effective, and if so whether they will substantially relieve the difficulties in the materials supply, is a question upon which judgment should be reserved until the S.P.A.B. has made its survey.

The argument to the contrary is that, irrespective of conditions at present, defense requirements are growing continuously and must grow further, if the war is to be won. Furthermore, whether the shortages are artificial or not makes little practical difference to those who cannot get materials, unless the artificial causes can be overcome.

#### Responsibilities of Individuals

Of course, there is another and better way of dealing with the situation if the necessary cooperation should be obtained, namely, the voluntary avoidance of hoarding or anything resembling it by all public and private interests, businesses and individuals. This would limit the rise in inventories to the necessary increase of materials in process. Undoubtedly the "protective buying" that has taken place all along the line, from the first stage of manufacture to the consumer, has magnified the shortages. The demands of consumers in many cases have been without regard for the situation in which the country finds itself or the call which the defense program makes upon production facilities and materials.

For a majority of people the defense expenditures have brought an increase in purchasing power. But all students of the question, and all persons of experience with war finance and inflation, agree that the increased buying power should not compete in the market with defense demands, but in the main should be turned back where it comes from; i.e., it should be used to pay for the armaments from whose production it originated. To the extent that it is not taken away by taxes, it should be saved and loaned to the Treasury.

The belief that the defense program can be used as a vehicle for raising the living standards of the country is an illusion which should be self-evident, unless the production of battle-ships, tanks and ordnance is construed as adding to living standards; and the longer the illusion persists the more costly it will be. But whole groups of the population, including farmers and organized labor, are largely animated by it. If people work hard enough and increase production enough they can, with the wonderful resources of this country, maintain a sound and even a high living standard and still carry on the defense program successfully. But it is manifest that they cannot continue to have goods produced for them on a scale to raise living standards to ever higher levels, which has been the trend since the defense program has started. If this fact were accepted by all groups, and a philosophy of saving and simple living truly observed, the greatest possible step would be taken toward an orderly proportioning of the productive effort, effective priorities for defense, and control of inflation.

Moreover, it is improper to speak of working and saving as sacrifices, or to describe every

case of unsatisfied demand as a shortage. Sacrifices which consist of foregoing the gratification of wants which have never before been gratified, or of a desire for "frills and gadgets," are not true sacrifices in the present situation. What the country wants now is defense and protection. It will be worth what it costs, and to buy and possess it is not a sacrifice but a privilege. Some persons are making sacrifices as compared with others, including those in the armed forces and those who are not receiving increases in income to help them bear higher taxes and living costs. But these are inequalities in the distribution of the burden, and do not describe the general situation.

If consumption and buying are not economical by choice they must obviously be so by government order. The industrial organization must be readjusted to increase the proportion of defense output to the total, and it will not be in satisfactory shape until it is. The task is the proper responsibility of both public and private interests, consumers as well as producers. The Government has additional responsibility for seeing that obstacles are not interposed, and every inducement given, to production of materials, and that supplies are kept flowing.

#### Supplies Will Support Record Production

There may be a tendency among some business observers to overweight the depressing effects of priority difficulties on the overall volume of activity. If all the materials available over the coming months are fabricated the production indexes will rise to new highs, irrespective of the dislocations and ungratified wants. In this Letter last month a few figures were given to show that the volume of materials available to the industries will be the largest by far that the country has ever known. These figures are elaborated in a table in this issue, page 117, and will speak for themselves. In view of their showing, the conclusion is warranted that "priorities unemployment" will represent only a transitory stage, reflecting inevitable frictions in the shift to all-out defense. The problems of holding these frictions to a minimum should not be unsurmountable, if approached with understanding and devotion to the general welfare.

#### Money and Banking

Announcement by the Federal Reserve Board on September 23 that, commencing November 1, the reserves which member banks of the System are required to keep against deposits will be increased by about one-seventh to the maximum now permitted by law came as no great surprise to the money market. For some weeks past, statements by public officials and other reports from Washington have indicated the probability of some action to reduce the huge excess of reserves held by the banks

above legal requirements as part of the program to prevent inflation.

In its announcement, the Reserve Board stated that action was being taken "after consultation with the Secretary of the Treasury" and "as a further step in the Government's program for combating inflation." While the Board did not repeat its request of last year for authority to double reserve requirements above the present allowable maximum, an intimation that such powers might be asked for later was contained in the following joint statement by Mr. Morgenthau and Mr. Eccles:

The Treasury and the Board of Governors (of the Reserve System) will continue to watch the economic situation and to cooperate with other agencies of the Government in their efforts, through priorities, allocations, price regulation and otherwise, to fight inflation. Recommendations on the question of what additional powers, if any, over bank reserves the Board should have during the present emergency and what form these powers should take will be made whenever the Treasury and the Board, after further consultation, determine that such action is necessary to help in combating inflationary developments.

#### Effect of New Reserve Requirements

The new requirements, to take effect November 1, compare as follows with those which have prevailed since April 16, 1938 for the different classes of deposits and banks:

Member Bank Reserve Requirements (Percentage of Deposits)		
	Present	New
On net demand deposits:		
Central reserve city banks.....	22%	26
Reserve city banks .....	17½	20
Country banks .....	12	14
On time deposits:		
All member banks .....	5	6

It was pointed out that the new requirements would result in a reduction of approximately \$1,200 millions in excess reserves, but would still leave an excess of around \$4,000 millions for all member banks. For the central reserve city banks (New York and Chicago) the reduction would be from \$2,400 millions to \$1,700 millions; for the reserve city banks from \$1,850 millions to \$1,500 millions; and for country banks from nearly \$1,000 millions to \$800 millions.

Continuing, the Reserve Board stated that these changes would leave the banks as a whole with ample funds to meet all bank credit needs of the defense program and all legitimate requirements of their customers, and this assurance was supported by data as to the present bank reserve position contained in the September Federal Reserve Bulletin. According to a survey for the week ended June 25, approximately three-fourths of all member banks held excess reserves considerably larger than would be needed to meet the new requirements. Of the remaining banks, nearly all held balances with correspondents far in excess of the amounts needed. Only 19 banks had excess reserves and correspondent balances aggre-

gating less than the increase in legal reserve called for.

The readjustments needed to be made by the second and third groups of banks in recalling balances from correspondents are expected to be relatively moderate at this time. Nor should there be need for any substantial selling by banks of government securities, the market for which continued quiet and firm following the announcement of the increased reserve requirements.

This is in marked contrast with the situation in 1936-37, when reserve requirements were raised in three steps by 100 per cent and when excess reserves were much smaller than at present. At that time interior banks withdrew around \$700 millions from New York, which, combined with the rise in reserve requirements, almost eliminated excess reserves in New York and induced substantial liquidation of government securities by New York banks.

As shown by the following table from the September Federal Reserve Bulletin, interior banks are in a relatively stronger position as regards excess reserves than are the banks in New York and Chicago:

**Reserve Position of Member Banks, by Classes of Banks,  
Average for Week Ended August 15, 1941**  
(In Millions of Dollars)

	Total	Reserve Balances Required	Excess	% of Excess over Required
Central reserve city banks				
New York .....	\$ 5,539	\$3,676	\$1,863	51
Chicago .....	1,145	738	407	55
Reserve city banks....	4,300	2,458	1,841	75
Country banks* .....	1,971	1,066	905	85
Total .....	\$12,954	\$7,937	\$5,017	63

\*Figures for required and excess reserves estimated.

It will be seen that the highest percentage of excess to required reserves is in the country banks, the next highest in the reserve city banks, and the smallest in the central reserve city banks.

#### Limitations Upon Credit Policy

The action by the Reserve Board in increasing bank reserve requirements raises a basic question as to how far measures of this kind can be effective in controlling inflation under present conditions. It is pointed out that credit control measures, which exert their chief influence through restricting the volume and increasing the cost of credit, can play but a secondary role in a time when the chief borrower in the market is the Treasury and the need for credit is largely for financing the defense program. Moreover, it is evident that credit control measures cannot be used to prevent price advances due to such non-monetary factors as shortages of plant capacity and essential materials, wage and labor policies, and federal legislation and subsidies affecting agriculture.

That the Reserve Board and the Treasury are aware of limitations upon credit policy under these conditions has been made clear on many occasions, and is evident also in the official statements announcing the action on reserve requirements. It appears in the Board's reference to the action as a "further step" in the Government's program, in the assurance of continuing ample funds for all legitimate credit needs and in the references in the joint statement of Mr. Morgenthau and Mr. Eccles to other control efforts "through priorities, allocations, price regulation and otherwise."

Of the many undesirable consequences of excessively cheap money enumerated by the Federal Reserve authorities, one of the most serious has been the constant pressure upon banks to expand their earning assets and, in particular, to compete in the market for government securities at yields that become increasingly unattractive to the individual investor. Hence the effect has been to make more difficult the sale of government securities to the general public and to lodge more of them in the banks, with consequent expansion of bank credit. If through a reduction of excess reserves to more moderate proportions, interest rates become a little less abnormally depressed, with banks less eager to reach out for new earning assets, and investors taking a larger share of the new Treasury financing, the authorities doubtless will consider that their action has served its purpose.

#### Progress of Defense Production

Public inquiry as to the progress of defense production has become more insistent in recent weeks. After sixteen months of effort, people would like to know how effectively the program is being carried out. However, there is confusion as to what the facts are, and perplexity as to how they should be interpreted. Much pertinent information is either not compiled or withheld from publication. The changes in organization in Washington have been bewilderingly frequent, and what they may signify in relation to actual output of arms is at best only a matter of opinion. As for estimates of what is practicable in the months to come, a Washington official is reported to have said that no set of statistics on defense requirements and supplies agrees with any other, and that none could stand for more than a few weeks without revision.

In the great desire to have production speeded up, criticism, both of the Government and the industries, is prevalent. Both are charged with lack of foresight, and with not putting first things first. It is pointed out that production of certain war machines, such as heavy tanks, is still in the blue-print stage and of others, including anti-aircraft and anti-tank guns, is negligible when contrasted with needs.

Ship construction, here and in Great Britain combined, still is probably less than sinkings. The heavy bomber output is small, and shipments of armaments under the Lend-Lease program are only a trickle. As a whole there are few real modern weapons in the hands of our armed forces.

Without doubt a great deal of the criticism is justified and constructive. The changes in the Washington agencies administering the program are themselves evidence of ineffective organization. On the other hand, public opinion in the confusion may underestimate the real progress that the industries are making. Few people have had the necessary experience to judge what output of armaments could reasonably be looked for at this time, and the enormous totals of appropriations and authorizations naturally inspire high expectations, which if unfulfilled are followed by disappointment.

#### Extent of the Program

The authorized defense program has now reached a total of \$56,536,000,000 according to the latest figures compiled by the Office of Emergency Management and published in the official weekly bulletin "Defense", issue of September 23. Nearly \$6 billions more will be added if the request for the second Lend-Lease appropriation is approved, as expected. These figures do not include \$3,674,000,000 of foreign orders for military supplies and materials. Adding this, the total amount to be expended in this country, chiefly from June 1940 on, and to be supplied by American producers, has reached practically \$66,000,000,000.

This total is so stupendous as to be virtually incomprehensible. It is almost twice the total expenditures by the United States in the last war. It is equivalent to three times the value of the country's railroad systems, which required half a century to build. The great bulk of it is for arms, although it includes army pay and subsistence, Lend-Lease foods, etc. Single sections of the program, which are intended to be completed in a matter of months, exceed in scope the greatest projects the country has ever before undertaken. Thus the tooling for the bomber program alone calls for expenditures equal to the cost of the Panama Canal. The immediate tank program calls for expenditures equal to the cost of two Panama Canals.

The official summary of the financial program is as follows:

Program	
Authorized program, June 1940-Sept. 15, 1941 (preliminary)	\$56,536,000,000
Army	24,607,000,000
Navy	16,978,000,000
Lend-Lease	7,000,000,000
Maritime Commission	2,494,000,000
R.F.C. and subsidiaries	3,240,000,000
Other agencies	2,217,000,000
Foreign orders in U. S.	3,674,000,000

#### Disbursements

Total disbursements April 1940 to	
August 1941	9,282,000,000
August 1941	1,172,000,000
July 1941	1,070,000,000
July 1940	176,000,000
Paid on contracts only, July 1940-Aug. 31, 1941 (estimated)	7,272,000,000

The following is a breakdown of the program prepared by the O.P.M.:

Naval vessels, parts	\$ 8,154,000,000
Merchant ships	3,358,000,000
Posts, depots, fortifications	4,181,000,000
Housing (defense)	602,000,000
Airplanes, engines, etc.	12,518,000,000
Industrial construction	2,150,000,000
Machinery, real estate, etc.	3,804,000,000
Ordnance	11,837,000,000
Equipment, supplies	7,944,000,000
Payroll	2,997,000,000
Subsistence, travel, misc.	2,371,000,000

One reason for delay and difficulty has been the need to revise plans and estimates of requirements as the program has grown. Not until March 1941 was the conception of making this country the arsenal of the anti-Hitler forces adopted as a national policy. Within a year the goal of aluminum production has been lifted from about 600,000,000 pounds to 1,500,000,000 annually. The magnesium goal has had an even greater relative increase. Schedules for merchant ship production have been revised upward. Tentative figures for the cartridge brass production program have been raised to a point where it is doubtful that any expansion can fully meet them. If all these plans are to be successfully carried out, increases in production of electrical energy, in output of chemicals, and in transportation, both domestic and import, also have to be provided.

The best overall measure of the progress of production is the total of payments against contracts. On June 30, thirteen months from the start of the program, the total thus paid was \$5,596,000,000. In the next two months \$1,676,000,000 more was paid. This is a steady acceleration, although it is far below the rate which will have to be reached if the objective of matching or excelling German armament production is to be attained.

#### A Year of Preparation

It could hardly be expected that a program of such magnitude would move forward with perfect smoothness. Inevitably some lines get the start and make progress while others are delayed. President Roosevelt has said that armaments cannot be delivered off department store shelves. They must first be designed, and the most basic of all the difficulties is to keep design in step with the lessons of this war. In airplanes the eight machine guns of the Spitfire made the armament of other pursuit planes obsolete, and there is constant call for more fire power, ceiling, speed and armor. In tanks revolutionary progress has been made in mo-

bility, fire power, and defensive protection. Unless designs are changed the product soon becomes ineffective. But even minor changes frequently require major redesigning, retooling and replanning, and unless designs are frozen for a period there can hardly be production at all. One of the major problems is to reconcile the demands of the designers with the requirement for production.

The other basic problem is to produce the plants and machinery to produce the armaments. The airplane industry got an early start through British and French orders, but in most defense industries the period since June 1940 has been chiefly a period of preparation rather than production. Whether the preparation has been effectively done will be known in the months to come. Along with the instances of delay and disappointment, it is certain that there have been many accomplishments of which American industry and American resourcefulness can be proud.

The first great needs of the defense program were for new plants and new tools. The machine tool industry is one industry which has been almost exempt from current criticism. Its output in August was \$64 millions, a new high record, which indicates that the projected goal of \$750 millions for 1941 will be reached, and this compares with \$450 millions in 1940, \$200 in 1939, and \$145 in 1938.

In plant construction the list of brilliant achievements is a long one. Scarcely a day passes without announcement of new facilities begun or put into production, well up to schedule. A little over a year ago the site of the Chrysler tank plant, which started shipments in July, was a corn field near Detroit. Great powder, explosive and chemical plants, constructed with equal speed, are now in operation. Huge additions have been made to airplane and airplane engine plants, and new ones built. Aluminum plants have been built and put into production in as little as six months. The total of new plants and additions to plants, according to Mr. Knudsen, has reached 2,750 with a value of \$4,800 millions of which \$3,800 millions is government financed. The bulk of the contracts placed through last Spring will be completed before the end of this year.

In factory methods the size of the orders to be filled, together with the mobilization of the best management of the country in defense work, have combined to make possible savings in time and labor in production which are as full of promise for future output as are the construction achievements. Special machines, which could never have paid for themselves until the mass orders came along, have been designed and constructed to do work formerly done by hand or on ordinary machine tools, and methods from older mass production industries are being adapted to the requirements of the new,—all

with the result that once again industry is crowding into months adjustments that otherwise would take years to accomplish. Thus we are building not only a vaster industrial organization, but a more efficient one as well.

#### Measures of Progress

Measures of the growth of the defense effort are available in figures of man-hours worked in key defense industries, compiled from Department of Labor statistics. Following is a tabulation of some of these figures, which show increases of 194 per cent in the aircraft industry, and of 171 per cent in shipbuilding, since May of 1940:

Industry	Man-Hours Worked — May, 1940 = 100				
	1940		1941		July (prel.)
	May	Dec.	May	June	
Aircraft .....	100	190	258	272	294
Brass, bronze & cop. prods. ....	100	154	169	175	176
Engines, turbines, etc. ....	100	150	200	210	220
Explosives .....	100	132	139*	—	—
Forgings, iron & steel.....	100	154	183	191	195
Fndy. & mach. shop prods. ....	100	129	157	166	171
Tools, machine .....	100	133	162	167	171
Tools, other .....	100	145	172	178	179
Shipbuilding .....	100	152	216	243	271

\* March, 1941; discontinued thereafter.

Due credit should be given for these increases. Meanwhile preparation for further increases goes on, and it is in the industries rather than in Washington that the final story of defense production will be told.

#### The Airplane Achievement

During 1939 the production of military airplanes (Army, Navy, British and French) averaged about 200 monthly, near the limits of capacity. By the time this country's defense program started capacity had been increased, and around 500 planes were being produced each month. In August 1941 production reached 1,854 and, according to the Office of Production Management, the rate a year from now is expected to be around 4,000 monthly. The output of training planes is said to have been constituting about half the monthly total. However, future production will include a greatly expanded percentage of combat and tactical planes.

So phenomenal has been the growth of this industry that it is next to impossible to present a concise review. Over forty models of combat planes and thirty of other service planes are being produced by fourteen major and a number of smaller companies. Vast orders for engines, sub-assemblies and parts have been distributed to other industries. Efforts to apply mass production methods to airplanes are handicapped by the constant need to improve designs, as well as by the extremely high degree of precision and delicate engineering required; but the progress has been remarkable.

The enormous expansion of the aviation program is shown in the following table:

Aviation Production Expansion				
	Plant Floor Space (a) (b)	Employees (a)	No. of Planes	Horsepower of Engines Produced (c)
Jan. 1939 .....	9,455	44,296	180	not avail.
Jan. 1940 .....	13,115	89,893	220	500
Jan. 1941 .....	25,456	193,893	1,036	2,420
July 1941 .....	40,096	237,267	1,460	4,000
Aug. 1941 .....	41,896	303,749	1,854	4,473
Peak Mo. 1942 (d)	53,658	505,781	4,000 (e)	10,000
July 1943 .....				13,000

(a) 1st of month, airplanes, engines and propellers, exclusive of sub-contractors and automotive firms engaged in aircraft manufacture. (b) Thousands of square feet. (c) Thousands of horsepower. (d) Subject to further expansion. (e) OPM schedule for July, 1942.

Airplane engine production amounts to about 4,500 units per month at present, and by July 1942 this is expected to be almost doubled and with greater horsepower per unit. The Wright Aeronautical division of Curtiss-Wright and the Pratt & Whitney unit of the United Aircraft Corporation are not only increasing their own output, but licensing other companies to produce their engines. Ford is close to production on Pratt & Whitney engines, and will be followed by Buick, Chevrolet, and the Jacobs Aircraft Engine Co. Studebaker will produce Wright Cyclones. The step-up in shipments of Wright and Pratt & Whitney during the past two years has been a remarkable achievement; the plant space of Pratt & Whitney has been quadrupled during the period, and shipments expanded at an equivalent rate. New Wright plants in Paterson and Cincinnati will soon double the company's output.

The slow rate of production of heavy bombers has been a subject of anxiety, in view of the considerable opinion that it is through heavy bombers that the defeat of Germany will be accomplished. These planes are the largest and most complex aircraft to produce, each involving many thousands of assembly and sub-assembly operations. Consolidated and Boeing are turning out the two types of four-motored bombers now being sent to Europe. Two new government-owned plants at Fort Worth and Tulsa, operated by Consolidated and Douglas, respectively, will work on Consolidated (Liberator) bombers. Douglas and Vega will join Boeing in Flying Fortress production. These are cooperative plans, based on use of interchangeable parts. Ford will engage in completed heavy bomber production as well as in manufacture of parts and sub-assemblies for Consolidated. Total monthly production of heavy bombers should run near 200 units next Spring. Some time in early 1943 the rate is expected to reach 500 per month.

Medium bombers will be turned out by North American and Martin not only in their own plants, but in government-owned plants at

Kansas City and Omaha, respectively. Chrysler and General Motors will make parts and sub-assemblies.

#### Automobile Industry's Plans

The automobile industry for many months has been turning its resources to defense work, and in due course may turn out as big a volume of defense products in a year as it ever has of automobiles. General Motors has undertaken or has under negotiation \$1.2 billion of defense contracts, against which deliveries totaled \$77,700,000 in 1940, \$131,800,000 in the first six months of 1941, and will reach an estimated \$275,000,000 in the second six months. About half of the contracts are in the aircraft field, including Allison and Pratt & Whitney motors, bomber sub-assemblies, and a great variety of parts and accessories. Other important contracts are held for machine guns, rapid fire cannon, shells, cartridge cases, gun housings, and other ordnance items, Diesel units for naval use, and special types of military trucks. More than 70 per cent of the defense contracts are for products other than those normally manufactured by the corporation's divisions.

The work of the Chrysler Corporation was described by Mr. K. T. Keller, the President, in the corporation's semi-annual earnings report August 15, as follows:

Most of the defense items are in the tooling and equipment stages with the actual production not yet begun. The M-3 tank is an exception. The tank plant is now 80 per cent equipped, and shipment of production tanks started in July. The output will increase rapidly from now on, with capacity production expected by the end of the year. The contract was signed August 15, 1940.

Extensive equipment and tooling preparations are proceeding on an anti-aircraft cannon and Martin bomber fuselages and nose pieces. The corporation is further engaged in the development and manufacture of cargo ship propulsion machinery, full-sized experimental units of which will be delivered in the latter part of August. Our engineers are making satisfactory progress in the development of a 2,000-horsepower aviation engine. They are also developing a 500-horsepower liquid-cooled tank engine and have just completed the development of a new air-plane landing-gear strut.

The Ford Motor Co. is not only completing a plant to make Pratt & Whitney motors, which is virtually ready for production, but in due time will be making 75 completed heavy bombers and sub-assemblies for 100 planes a month, in a new plant at Ypsilanti.

Packard is just bringing into production a plant for Rolls-Royce aircraft motors. Studebaker is preparing to make Wright Cyclone motors; Nash-Kelvinator is to turn out propellers; Hudson is completing a naval arsenal for ordnance production; and other automobile companies and parts and accessories manufacturers have a diversity of armament work. These lists are all incomplete, but illustrate the diversity of products; and the work is largely of a kind which required new plants or rearrangement, new tools, and extensive preliminary planning. According to estimates in

the OPM, the automotive industry eventually may carry \$7½ billions of the defense program.

#### Shipbuilding Progress

Rear Admiral Emory S. Land, Chairman of the Maritime Commission, recently stated that the country may look for 1,153 ships of 12,410,000 deadweight tons to be produced in the two and one-half years prior to the end of 1943. This excludes the vessels already delivered under the Commission's long range program established in 1937.

The pressing expansion of merchant shipbuilding facilities started during 1940, and estimates of requirements have been raised periodically since the start of the program. During the first eight months of 1940, 33 ships of about 375,000 deadweight tons were produced, and during the same period of this year 58 ships totalling about 630,000 deadweight tons. Production for the full year 1941 is expected to reach about 130 ships of 1,300,000 deadweight tons. According to Admiral Land production expectations in 1942 amount to 574 ships, total tonnage 6,046,000. The Admiral's quarterly figures of production plans are given herewith:

	Vessels	Deadweight Tons
1942—1st Quarter.....	90	1,000,000
2nd " .....	146	1,400,000
3rd " .....	154	1,646,000
4th " .....	184	2,000,000
1943—1st " .....	220	2,270,000

The problems involved in expanding the long established industry of shipbuilding are as difficult as those of newer industries. In order to show the magnitude of the task it may be noted that in the first quarter of 1942 more new ships are expected to be produced than in any full year in the two decades up to 1941, and that production planned for the first quarter of 1943 is 24 per cent greater than that of the entire year of 1918. The accelerated rate of construction is aided by mass production methods using simplified designs, the pre-fabrication of sections, and welding replacing the use of rivets. It is estimated that, on the average, merchant ships will be constructed within four and a half to six months, or about half the time required during the previous war.

Naval building schedules have been speeded up drastically as compared with pre-defense rates. Under the naval shipbuilding program 213 vessels of all classes were completed or placed in service during the first eight months of this year, and keels were laid for 436 ships ranging from harbor tugs to battleships. The number of ships reported now building is 968 with a total tonnage of 2,222,460. Since July 1, 1940 the Navy has ordered 2,831 ships of all classes, the full quota authorized by law under the two-ocean Navy program.

#### Tanks and Ordnance

The latest development in the tank program is that Ford and General Motors will enter

tank production. Mr. Keller is reported to have said that the Chrysler plant's output of medium tanks, the M-3s of 30 tons, may reach 15 daily (three-shift capacity) by the end of the year, and these tanks are being turned out also by the American Locomotive Co., the Pullman Standard Manufacturing Co., the Baldwin Locomotive Works, Pressed Steel Car Co., and Lima Locomotive Co., which are in various stages of production or preparation. The American Car & Foundry Co. has made well over 1,000 light tanks already. The Army's Rock Island arsenal also produces tanks, and Baldwin is developing a heavy tank.

Ordnance output leaves much to be desired. For various reasons the start on many types of guns was late. However, the Army reports that ten plants, four of which are General Motors units, are now producing machine guns, compared with only two plants fourteen months ago. Output is five to six times that of a year ago. As a general rule, figures given out on ordnance production are confined to percentage increases rather than actual totals.

For the production of ammunition, the Government has turned not only to the great powder and chemical companies, but to industrial concerns which are inexperienced in these industries yet can bring to the task management and engineering skill. Thus shell or bag loading plants are to be operated by Johns-Manville, producers of building materials, by the Sherwin-Williams Co., paint manufacturer, and by the Coca-Cola Co. Companies which would normally be considered remote from armament production, such as the Armstrong Cork Co., are making shells, and shell orders are widely distributed through the metal working industries. New powder plants started only a year ago are already in production. Thirty-three new munitions plants are built or building, and thirteen are being expanded, according to a recent summary.

#### Expansion of Raw Materials

To provide the raw materials needed for fabrication of these armaments, expansion of capacity is under way in primary industries. In the eighteen months ending June 1941 steel ingot capacity was increased by 4,543,000 tons; a further rise of 2,000,000 tons is scheduled for the second half of this year, and the expansion in 1942 will be from 2,000,000 tons up. The aluminum industry by the end of 1941 will be ready to produce twice as much as it turned out in 1940, and expansion during 1942, if the goal of 1,500,000,000 pounds is reached, as expected, by the end of that year, will bring capacity to almost four times the 1940 output. Imports from Canada next year will increase to 200,000,000 pounds. Magnesium projects under way or in negotiation represent a goal of some 350,000,000 pounds, according to announcement by Federal Loan Administrator Jesse Jones.

Four large brass mills are building, to be ready early next year.

While there is uncertainty as to the rapidity with which the goals of raw materials production will be reached, the accompanying table shows the great gains that have been realized this year, as compared with 1940 and 1939, in supplies of critical and strategic commodities. Unquestionably, the industries have greater supplies of materials to draw on than ever before in this or any other country. Whether everything possible has been done to enlarge these supplies is another question. There are copper mines in the United States, capable of producing perhaps 75,000 tons annually, which are not operating because the fixed price of copper is not profitable to them, and the delay in making provision for this production at a time when copper shortage is being cried is one of the minor mysteries of governmental policy.

An adequate supply of electric power is vital for defense production. According to recent calculations, generating capacity during 1941 will be increased about 3,500,000 kilowatts, and in 1942 by 3,227,000, while installations in excess of 3,000,000 are already scheduled for 1943. The railroads this Fall are carrying the heavier traffic without car shortage, despite predictions in some quarters of a critical situation. The roads should have credit for their foresight and performance, particularly in view of their financial difficulties of the past twelve years.

#### The Objective

It seems correct to say that in the prevailing opinion of the country the defense effort is greater in promise than performance. Despite the brilliant achievements with which the program has been studded, deliveries of arms are falling far below requirements. An official of

the O.P.M. recently said that the production of the United States to date had not yet replaced the production which the democracies lost through the fall of France alone.

It is not within the scope of this article to discuss the reasons for delays and disappointment, apart from the time and preparation required prior to production. Undoubtedly the responsibility, in those areas where the effort has been sluggish, must be widely shared. It began with delays and defects in planning, in organization, and in national policy. There are points at which blame falls on government, on industry, and on labor. In a broad sense it falls on the entire country, in failure to give complete support and unity of effort in putting first things first.

But with the delays and disappointments, it is plain that the promise of production for the coming year is high. The machine is moving, in too many places, slowly; but it is moving, and with effective direction and general support it will produce wonderful results. The problem is to produce these results in time.

The defense production needed is the amount necessary when added to British output, to excel the armament output in Germany and German controlled Europe, and to catch up with the earlier start that Hitler made. Mr. Donald M. Nelson, executive director of the new Supply Priorities and Allocations Board, has estimated the figure required to attain this objective at \$35 billions annually. Great Britain is spending the equivalent of \$13 to \$15 billions annually for war, which is perhaps half of her national income, and Germany herself is believed to be spending possibly \$24 billions, in the neighborhood of 60 per cent of her national income.

Approximate Supplies of Raw Materials and Semi-Manufactures under the National Defense Program

		1929	1938	Actual				1941 Planned or Est.	Index			
				1939	1940	1941	1942		1939	1940	1941	1942
Steel, output .....	000 s.t.	63,200	31,800	52,800	67,000	82,000	92,000	100	127	155	174	
Pig iron, output .....	" "	46,800	20,800	34,800	46,100	56,000	59,000	100	132	161	170	
Copper, supply incl. impts.....	" "	1,160	608	801	1,070	1,650	1,800	100	134	206	225	
Lead, " " " .....	" "	972	546	667	782	925	1,100	100	117	139	165	
Zinc, " " " .....	" "	634	421	636	719	950	1,000	100	113	149	167	
Aluminum, primary output.....	000,000 lbs.	225	287	327	413	700**	1,500*	100	126	214		
Tin, imports .....	000 l.t.	85	49	70	121	155		100	173	221		
Nickel " .....	000,000 lbs.	67	44	100	150	170		100	150	170		
Magnesium, primary output.....	" "	1	6	7	13	62**	350†	100	185	886		
Manganese ore, shpt. & impts.(a)	000 l.t.	723	531	683	1,359	1,400		100	199	205		
Chromite, mine shpts. & impts.	000 l.t.	318	353	321	660	800		100	206	249		
Molybdenum, mine shpts.....	000,000 lbs.	4.0	33.3	30.2	34.2	40.0	45.0	100	113	132	149	
Antimony, supply incl. impts.....	000 s.t.	32	21	23	29			100	126			
Tungsten, " " " (b)	000,000 lbs.	7.2	3.1	5.6	10.7	13.3	16.0	100	191	237	286	
Sulphur, shpts. ....	000 l.t.	2,437	1,629	2,234	2,559	3,000		100	115	134		
Sulphuric acid, output.....	000 s.t.	8,400	6,585	8,209	9,185	10,000		100	112	122		
Toluol, output (c).....	000,000 gals.	17.1	13.0	19.7	26.4	30.0		100	134	152		
Ethyl alcohol, output.....	" "	207	193	222	263	330		100	118	171		
Methanol, output .....	" "	7.6	20.0	34.3	45.0	60.0		100	131	175		
Rubber, crude imports.....	000 l.t.	528	400	500	818	1,000		100	164	200		
Wool, consumption .....	000,000 lbs.	555	509	677	689	950		100	101	140		

(a) Ore containing 35 per cent or more manganese. (b) Tungsten content of ores and concentrates. (c) Coke ovens only. \* Rate at end of year. \*\* Present annual rate. † Capacity now projected, date uncertain. s.t.=short tons, l.t.=long tons.

Mr. Knudsen prefers man-hour figures to dollars as a measure of armament effort. It may be estimated that each \$10 billion of armament represents 5,000,000 man-years of work. This is a rough approximation of the task on which the industries and the government have embarked, and to which the energies of the country must be primarily devoted.

### Wartime Profits

The New Republic of September 8 refers to a tabulation of business profits that appeared in our August Bank Letter, and contains further statements regarding corporation earnings that are worth examining as representing a point of view which is encountered elsewhere and which is at the root of much misunderstanding and ill-feeling. The article, under the heading of "Wartime Profits," follows:

A tabulation of the public statements of 350 large industrial corporations, made by the National City Bank of New York, shows an average increase in profits, after tax deductions, of approximately 20 per cent in the first half of this year over the first half of 1940. The average rate of profits of these companies was 12.8 per cent. The profits of the corporations which hold the fat defense contracts mounted like mercury under a sun lamp; Baldwin Locomotive net for the period was up 43 per cent; Bendix Aviation, 77 per cent; North American, 65 per cent; United Aircraft, 100 per cent; U. S. Steel, 69 per cent. Even these statements should be read with care, because in most instances accountants have subtracted in advance from their gross income all the additional taxes which they figure the company might have to pay during the half year as a result of the new tax bill. Many companies are also making a magnificently generous allowance for future taxes and depreciation. For example, General Motors reported profits up only 4 per cent; and Dupont bookkeepers were able to show an actual decline of 7 per cent. Four large auto producers, including GM, kept their margins down by increasing contingency reserves 285 per cent against "future tax increases." We trust that Congress will justify the business acumen of the accountants by passing the excess-profits tax which they know these skyrocketing gains demand.

In the above quotation, only the first two sentences contain data from our Bank Letter, which gave composite figures covering 360 (not 350) leading corporations for the first half of this year by major industrial groups.

Although the accuracy or inaccuracy of the gains quoted for individual companies in the half year is perhaps not the most important issue of the article, nevertheless certain of the data given are subject to correction. For example, Baldwin Locomotive Works issued no report for the half year, but only for the *twelve months ended June 30*. Bendix Aviation Corporation net profits for the half year increased by 55 per cent, not 77 per cent, on sales that more than doubled. The 100 per cent increase for "United Aircraft" may be misleading to many readers in that it apparently refers to United Aircraft Products, Inc., a comparatively small company making parts and accessories, which has a similarity of name but no connection with the

United Aircraft Corporation, whose half-year's sales increased from \$39,217,884 to \$121,830,167, but whose net profits after taxes *decreased* from \$6,228,106 to \$5,583,350, or by 10 per cent. The rate of profit on the volume of product was less than 5 per cent.

Moreover, it is evident that mere percentage increases taken by themselves are meaningless, and become significant only when taken in conjunction with the volume of business done and amounts of capital employed as well as the size of the profits in the base period. Ordinarily an increase in gross sales might be expected to result in a much sharper increase in net profits, but in the case of the companies quoted for which sales figures are available the reverse has been true, due to the rise in wages, taxes and other costs. It is apparent that these companies each had a decrease in profit per unit of product. Business men generally are anticipating very small profits on defense work, especially after taxes.

### The Question of Reserves

The quoted comments imply a criticism that has recurred for years, to the effect that in many cases the reported net profits are an understatement because of the large reserves which corporations have deducted for taxes, depreciation, and contingencies.

The editor of The New Republic, and all others who have anything to do with the earnings figures of corporations, must certainly agree that there are taxes, depreciation and contingencies to be provided for from the income received during any year, whether those particular expenses are payable during that year or, as in the case, for instance, of taxes, are payable at a later period. The question then becomes whether the reserve set up in any one particular case is adequate or whether it is excessive. Reserves must be based on estimates at the time that the amounts are provided because the actual amount that is needed is not determinable at that time.

The real test, after all, is whether over a period business tends to set up reserves in excess of needs. Experience shows that the tendency is the other way, and the charges made currently have often had to be supplemented in later years by large amounts which usually appear as surplus adjustments.

An example is found in a compilation by Standard & Poor's Corporation of the statements of 400 leading industrial corporations for the years 1927 through 1939. This composite statement, which gives separate figures for surplus adjustments, shows that debits against surplus exceeded credits to surplus in each of these years. For the thirteen-year period, the net excess of debits amounted to \$2,812,000,000.

### Reserves for Taxes

Tax reserves are deducted from income and set up as liabilities to show the taxes that will be due in 1942 on 1941 income, including the 24 per cent corporate normal tax, the excess profits tax whose maximum rate was raised from 50 to 60 per cent in the Revenue Act of 1941 recently enacted, and the new corporate surtaxes of 6 and 7 per cent introduced in this Act. At the time the half-year's statements were made up, this Act was pending in Congress and there were official intimations that its passage might be followed shortly by another tax bill calling for further increases.

Any company which submitted a financial statement that disregarded tax liabilities would be open to serious criticism from its shareholders and creditors.

### Reserves for Depreciation

Good accounting practice calls for the writing down of the cost of plant and equipment over a period of years, in order to reflect the decline in its value due to age, wear and tear, and obsolescence. A variety of different methods and rates for computing depreciation are in common use, from which those considered most appropriate in the particular case concerned are selected. Emergency plant facilities constructed for producing war materials are ordinarily expected to have a shorter life than similar facilities for producing peace-time materials, and accordingly are depreciated at a faster rate. The Government has recognized this and made provision in law for higher depreciation rates for income tax purposes.

Depreciation reserves, like others, may be found to be either smaller or larger than actually required, in which case the subsequent charges and net income will be affected correspondingly. Experience over a period of years, however, has shown that the more prevalent tendency has been in the direction of under-depreciating the fixed assets. Many corporations have announced heavy write-downs of fixed assets, with corresponding charges directly against surplus or capital, which would not have been necessary had adequate reserves for depreciation been set aside year after year.

An example of this tendency is found in the "Statistics of American Listed Corporations" which was published this year from data collected by a W.P.A. study sponsored by the S.E.C. and is based upon the 1937 detailed statements of practically all corporations listed on national security exchanges. It shows that 1,741 corporations tabulated made direct charges against surplus in that year of \$81,736,000 for write-down of land and plant accounts, and of \$24,313,000 for loss on disposal of capital assets. These charges in 1937 were in addition

to the regular and special charges for depreciation of the property that had been made over a long period of years previously.

### Reserves for Contingencies

Reserves for contingencies — the third type mentioned in the quotation above — represent the setting aside of a certain amount from income or from capital funds as insurance against contingencies, involving the payment of indeterminable liabilities or the shrinkage of various assets, which at the time cannot be estimated with accuracy but which experience shows are almost certain to arise. In setting up such reserves, consideration is given to known risks, to past experience and to the action being taken by other companies in related lines. Although in some instances reserves have found their way back to surplus account, in most cases the reserves have eventually been used up in taking care of liabilities and losses.

Periods of rapidly expanding business and earnings, which are either temporary or involve abnormal risks, call for correspondingly larger reserves. This was found to be so by the experience after the last war, when the depression in 1920 swept away a substantial portion of corporate values, and many of the corporations which had been most active during the war suffered losses that more than wiped out the war profits.

This experience undoubtedly has caused a growing number of forward-looking corporation executives recently to set aside reserves for cushioning the readjustment that invariably follows an inflationary period, in order to protect both shareholders and employees. While such conservative accounting does not result in any reduction in taxes, since these are determined by the detailed rules and regulations of the Bureau of Internal Revenue, it does conserve the assets and business of a corporation and follows the policy advocated by such government agencies as the R.F.C. and S.E.C. of setting up adequate reserves. Such action is particularly essential in the defense industries, where it is obvious that when the emergency is over much of the equipment will be practically useless.

It should be further noted that the capacity of industry to pursue constructive and aggressive policies in the post-war readjustment period to employ workers released from defense will depend upon their financial position. In that difficult time some cushion of surplus and reserves will be essential both for taking up the shocks of readjustment and financing those new undertakings essential to a sound post-war recovery.

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